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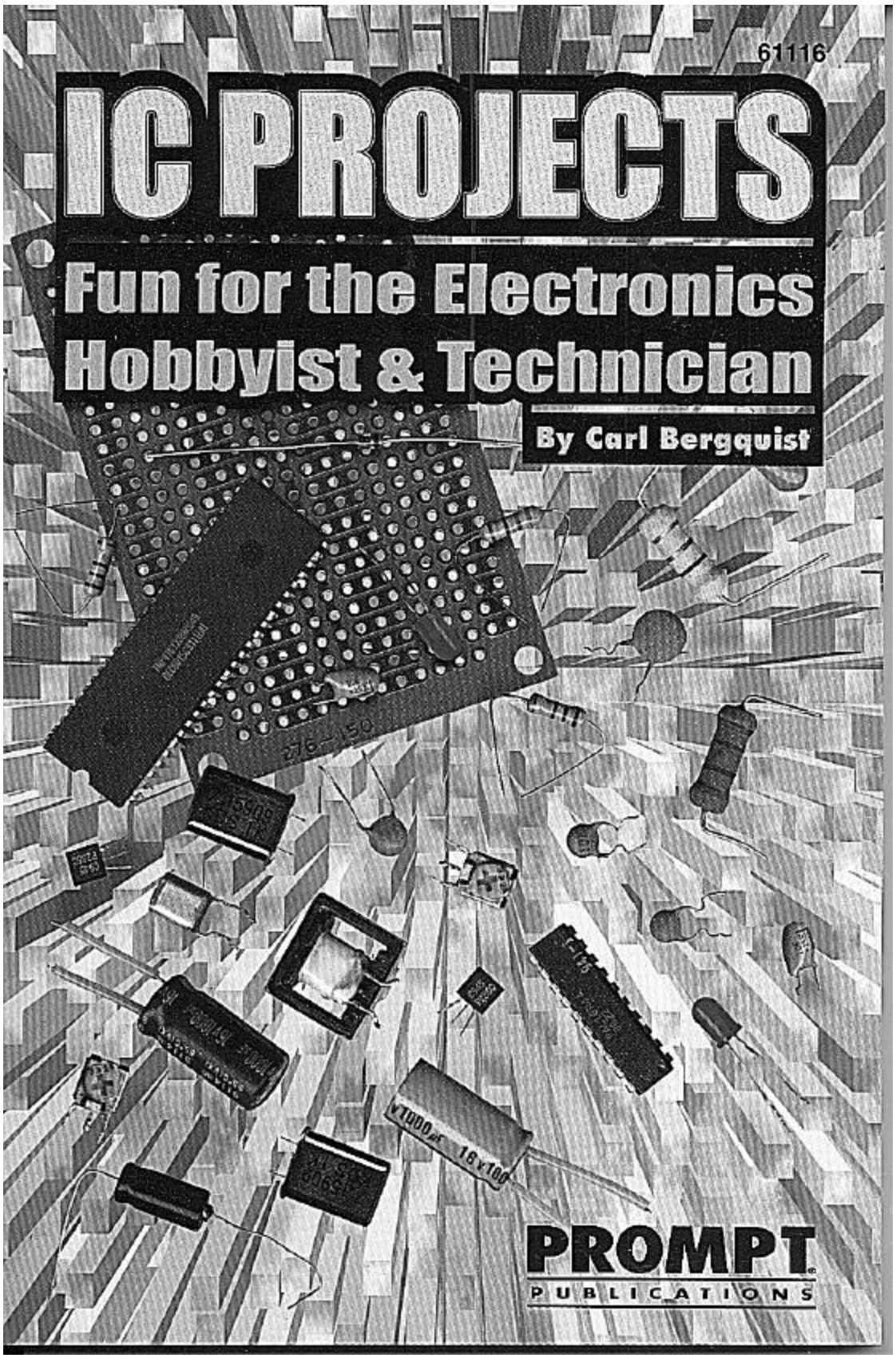

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IC PROJECTS

Fun for the Electronics Hobbyist & Technician

IC Projects was written for electronics hobbyists and technicians who are interested in projects for integrated circuits — projects that you will be able to breadboard quickly and test easily. Designed to be fun and user-friendly, all of the projects in this book employ integrated circuits and transistors. *IC Projects* presents the experienced electronics enthusiast with instructions on how to construct such interesting projects as a LED VU meter and an infrared circuit.

The chapters contained in *IC Projects* cover the entire circuit construction of the following:

- LED VU Meter
- Electronic Memo Pad
- Digital Thermometer
- Digital Stopwatch
- Johnson Counter
- Electronic "Bug" Detector
- Function Generator
- Sound Detector/Light Organ
- Sound Effects Generator
- Touch-Tone Pair Decoder
- Sound Frequency Reader
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- Wireless Microphone
- A/D Converter
- Logic Probe
- Laser Pointer
- AND MUCH MORE!!

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Table of Contents

Table of Contents	5
Introduction	9
Project #1:	
Stereo Bargraph VU Meter	13
Project #2:	
DTMF Decoder	19
Project #3:	
ISD 1000A Voice Recorder	27
Project #4:	
Digital Audio Frequency Meter	35
Project #5:	
Temperature Detector	43
Project #6:	
TTL Counter	49
Project #7:	
Up/Down Counter	57
Project #8:	
ICM7217 Digital Stopwatch	63
Project #9:	
Digital Alarm Clock	71

Integrated Circuit Projects

Project #10:
4017 Counter/Divider 79
Project #11:
FM Wireless Microphone 89
Project #12:
RF Bug Detector 99
Project #13:
Passive Detector Receiver 107
Project #14:
RCA Voltmeter 113
Project #15:
7107 Digital Thermometer 119
Project #16:
8038 Function Generator 127
Project #17:
Logic Probe 133
Project #18:
Color Organ 141
Project #19:
Laser Diode Driver Circuits 147
Project #20:
Audio Tone Generator 155
Project #21:
TV Modulator 161
Project #22:
Touch-Tone Generator 167
Project #23:
Frequency to Voltage Converter 173

Project #24:
Infrared Transmitters and Receivers 179
Project #25:
ZN414Z Based AM Radio 191
Conclusion 197
Appendix A 201
Index 207

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Introduction

This book came about as the result of a conversation with Candace Drake. For those of you who don't know Candace, she is the lady I deal with at Prompt(R) Publications (her official title is Managing Editor, but we don't want it going to her head).

Anyway, a while back I asked Candace what kind of books she was interested in, and she recommended a project book for integrated circuits. You know, the type you can breadboard quickly, and see if you like it. It sounded good to me, and so, *IC Projects* was born, or perhaps more accurately, conceived.

In reality, the text's creation wasn't as simple. In preparation, I thought about the many books regarding this subject I had read and used over the years, and decided the best approach was to write a volume containing the projects I would like to see. My "Dream Book", if you will.

Hopefully, the circuits presented would also be what other experimenters were looking for. This did afford a challenge, however, as the variety of ICs available is probably surpassed only by the variety of Asian Flu strains.

So, some practical parameters had to be established. The first was (drum roll, please) no bizarre, weird, impossible to find

Without sending off to Istanbul, or some equally outrageous destination ICs. I have made every effort to provide designs that use commonly available ICs (at least as of this writing).

I don't know about you, but few things frustrate me more than to read a construction piece that utilizes some IC I can't find in any of the catalogs, or is made by a company I've never heard of (i.e. The Ma Jones Apple Pie, Inner Tube and Integrated Circuit Company). I invariably end up tossing the article in disgust, but worse, it's a waste of time, effort, and publication space.

Thus, you WILL be able to find the chips in this book. On some occasions. I will include certain suppliers in the parts list, but the IC WILL be available. If not, write me an ugly letter.

Another parameter is cost. There have, over the years, been countless projects that held great interest for me, but I sure hated the part about having to re-finance my car to pay for them. Again, every effort has been made to keep the expense within "hobby" range.

A third aspect, regarding the ICs, is ease of use. For example, and I am not trying to knock microcontrollers, not at all, they serve a very useful purpose, but how many of us have, or have access to, a programmer for the Motorola series, and a programmer for the Intel series, and a programmer for the PIC series? You see what I mean? We are back to expenses many hobbyists can't afford.

There were some other parameters, but I'm not going to get into those. This is probably beginning to bore you. Let me just say that this text is intended to be, as much as I hate to use this tired, overworked phrase, user friendly.

Nearly all the projects employ integrated circuits. The FM transmitter and the laser diode driver use transistors, but after all, what is an integrated circuit? Just a bunch of transistors. They run the gamut from a handful of gates with 20 semiconductors

to sophisticated microprocessors containing 20,000,000 transistors or more. So, I reckon you can forgive me a couple of designs.

OK, once again, here it is, *IC Projects*, Volume I (whether there is a volume two depends largely on you, the consumer). I do hope you like it, and I think you will. Candace liked it. She must have, otherwise you wouldn't be reading this.

Have fun, and THANKS!

Carl

Index

?? erter 30, 37, 114,
?? 15, 116, 117, 120
??us 30
??ng 33

?? Light 189
??ent Temperature 44, 122
??erage 145, 146, 149
??mplifier 18, 37,
144, 170, 192, 193
?? Meter 14, 18
??Meter 14, 18
??Storage 28
??17, 25, 67, 115,
??116, 149, 150
??Display 60, 64
??ng Machine 29
??111, 166
??t 120
??mplifier 37, 109
??Noise 33

??Range 36
??Section 33
??Transformer 17

??ass Filter 143, 144, 186
??ph Display Driver 102
??ph Driver 15
??and 166

Battery 110
BCD 24, 60, 65
70, 74, 114, 122
BCD Code 21
BCD Device 51, 52
Beam Spread 154
Bell Laboratory 18, 61, 148
Bias 93, 150
Binary Code 21, 51
Binary Decoder 50
Binary Encoder 50
Bits 21, 30
Bridges 122, ?? 100
Bridges 122
Bug Detector 18, 30, 100, 101, 102, 103, 104, 105

By-Pass 93
Byte 117

C

Capacitance 165
Capacitor 37, 53, 60, 109, 120, 121, 122, 123, 128,
129, 143, 151, 157, 158, 159, 163, 164, 165, 166, 176,
177, 192, 193, 194

Carrier 187
Carry Line 60
Cascade 30, 53, 59, 81, 86
Cathode 17, 136, 149
Center Tap 17
Channel 14

Charge Pump 174
Charge/Discharge Network 157
Chips 15

Clock 50, 54, 120, 170
CMOS 80, 82, 139
Code 23
Coherency 154
Coil 93, 95, 97, 109, 144, 145, 146, 164, 165, 166, 192, 194, 195

Collector 134, 135, 150

Collimation 154, 189
Color Burst Crystal 24, 73
Color Organ 144
Communications Transceiver 14
Comparator 44, 128, 174, 187
Comparator Circuit 15, 144
Complementary Metal Oxide Semiconductor 80

Control Logic 28
Converter 128
Counter 50, 53, 58, 59, 60, 65, 69, 74, 82, 85, 115, 122, 144

Counter Register 65
Counter/Display Driver 64
Counting System 64
Crystal 73, 121, 170
Crystal Oscillator 164
Current 150

D
D/A converter 30, 38
Data 29
Data Sheet 32, 154, 174
Decade Counter 51
Decimal Digit 51
Decimal Point 117, 124
Decoder 120, 171
Decoder Chip 21
Decoder/Driver 21, 24, 74, 114, 115, 122

Detector 102, 103, 172, 183, 185, 193

Digit Decoder 37
Digit Driver 37
Digital Counter 54
Digital Meter 39
Digital Recorder 28
Diode 60, 109, 120, 121, 135, 137, 144, 149, 151, 152, 153, 154, 164, 165, 170, 194

Diode Laser 149
Diode Network 163
DIP 120
Disk Capacitor 95
Display 24, 25, 50, 52, 60, 67, 74, 75, 77, 84, 116, 117, 120, 122, 125

Display Driver 37, 50, 52
Divergence 154
Divider 82
Driver 50, 65, 66, 67, 117, 120, 153

Driver Circuit 149, 152
Dropping Resistor 15
DTMF 168, 169, 171, 172
Dual Timer Chip 158
E
Earphones 109
EEPROM 29, 30
Einstein, Albert 148
Electronic Memo Pad 28
Emitter 91, 134, 135, 150
Encoder/Decoder Chip 185
Energy 151, 183
Epoxy 47
Error 120

F
Federal Communications Commission 95

FET 93
Field Effect Transistor 93
Field Strength Meter 112
Filter 28, 29, 143, 144
FM Modulator 164
Frequency 40, 85, 93, 182
Frequency By-Pass 93
Frequency Counter 70
Frequency Divider 70, 85
Frequency Meter 36, 39, 40, 131

Function Generator 128
G
Gain 37, 93, 101, 103, 109, 116, 129, 164, 193
Gain Control 28, 33, 117
Gallium/Arsenide Junction 153

Gate 67, 150
Generator 130
Governor 174
Ground 32, 69, 109, 117, 124, 135, 139, 144, 163
Ground Plane 33
Ground Rail 123

H
Harris-Intersil 64
Headphones 111
Hex Digit Driver 75
Hex Inverter 65

I

Inductance 165
Induction System 109

Infrared Light 152, 181, 182, 183, 184, 185, 188
Input Transducer 122
Input Voltage 15, 16, 122
Intensity 14, 182
Interference 33
Intervalometer 157
Inverter 66, 136, 138, 139, 187
Inverter Gate 67
Inverting Potential 44
ISD Series 33

J
Johnson Counter 80, 87
L
Lamp 174
Laser 61, 148, 149, 150, 152, 153, 154

Laser Diode 148, 149, 150, 151, 152, 153, 154
Layout 68, 69, 76

LCD 74

LED 14, 15, 16, 18, 29, 21, 37, 50, 52, 64, 65, 67, 74, 75, 82, 84, 85, 102, 103, 115, 116, 122, 134, 135, 136, 137, 138, 150, 176, 177, 178, 184, 188, 189, 190

Light 181, 182, 183, 184
Light Wave 182
Load 109, 145, 146, 174
Logic 33, 134
Logic Chip 69
Logic Probe 134, 139, 140
Logic Scheme 66
Logic State 135
M

Megabit 30
Memory 30
Memory Cell 30
Metal Oxide Varistor 170
Meter 17, 39, 120, 121, 122, 124, 125, 174, 177

Microphone 18, 33, 36, 37, 40, 41, 93, 96, 103, 144, 189

Microphotography 61
Microprocessor 137, 140, 189
Modem 111
Modulator 163, 164, 166
Monitor 114
Morse Code 111
Mostek Corporation 72
MOV 170
Multimeter 114, 125
Multivibrator 40, 137, 139
Mylar 176
N
NAND Gate 65, 66
National Semiconductor 15
Noise 21, 33, 39
NPN 91, 93, 95, 115
Nybble 21

O

Op-Amp 44, 45, 46, 101, 102, 103, 143, 144, 145, 146, 149, 174, 175, 185, 186

Optical Collimator 189
Oscillation 128
Oscillator 24, 37, 39, 40, 65, 73, 75, 82, 85, 91, 92, 93, 94, 95, 97, 101, 103, 105, 108, 112, 121, 128, 157, 164, 166, 169

Oscilloscope 39
Output 85
Output Buffer 128

P

PA Amplifiers 14
Passive Detector 100, 102, 108, 109
PCB 17, 60, 68, 76, 116
Persistence of Vision 83
Photodiode 149, 150, 186
Phototransistor 184, 183, 185, 186, 189

Pickups 96, 176
Pinouts 15
PNP 91, 92, 93, 95
Point-to-Point Wiring 68
Positive Rail 58, 69, 139, 150, 163

Potentiometer 17, 37, 39, 40, 44, 51, 53, 82, 102, 103, 109, 111, 116, 122, 124, 125, 129, 144, 146, 150, 153, 157, 158, 159, 164, 171, 194

Power 67, 69, 111
Power Source 125, 130, 152
Power Supply 25, 37, 38, 53, 60, 97, 110, 116, 120, 122, 146, 152, 153, 154, 158, 170, 194

Power/Signal Meter 18
Pre-Amp Stage 144
Pre-Amplifier 28, 37, 93, 96, 109, 189
Probe 122, 136, 137, 139
Prototype 134

Pulse 50, 51, 55, 66, 120, 137, 148, 183, 184, 187

Q

Quad Segment Driver 75

R

Radiation Theory 148
Radio 108, 192
Radio Shack 32
Radio Wave 182
Random Number Generator 85
Receiver 14, 24, 101, 103, 108, 109, 111, 183, 184, 185, 188, 189, 192, 195, 196

Rectifier 185
Rectifier Bridge 170
Reference 120
Reference Voltage 15, 121
Reflector 189
Register 65, 66
Regulator 67, 116, 123, 124
Relay 144, 145, 146, 157, 174, 176, 183, 184, 185

Remote Control 184
Repeater 172
Resistor 15, 44, 52, 54, 60, 101, 117, 121, 124, 134, 143, 145, 151, 157, 164, 164, 165, 193

RF 102, 103, 183
RF Amplifier 193
RF Circuit 164
RF Energy 103, 182
RF Modulator 164
RF Oscillator 164

RF Receiver 100
RF Signal 101
RF Tank 166

S

Sample Rate 121
Sawtooth Signal 54

Scanner 149
Schmitt Trigger 65, 187
Semiconductor 61, 91, 92
Serial Signal 183
Signal 21, 24
Signal Conditioning 24
Sine Wave 128, 129, 186
Solenoid 176
Sound Meter 40

SPDT 125
Speaker 40, 75, 109
Speaker Output 33
Speedometer 174
Spike 24, 144, 152
Spinel 148

Square Wave 54, 128, 129, 186
Square Wave Generator 82
Stopwatch 65, 68
Storage 29
Superheterodyne 108
Supply Rail 17
Supply Voltage 15, 145
Surge 152, 153
Switch 58
T
Tachometer 174, 175, 176, 177, 178

Tank Circuit 164
Tape 29
Tape Deck 14
Telephone 168, 169, 170, 171, 172

Telex Signal 111
Temperature 44, 45, 122
Temperature Detector 124
Temperature Meter 125
Temperature Monitor 46
Temperature Probe 122, 123
Thermistor 44, 45, 46, 122, 125
Thermometer 114, 120, 125
Threshold 154
Timer 50, 51, 54, 82, 169
Timing Unit 65
Tone 146, 157, 159, 169
Tone Decoder 21, 23, 24
Tone Generator 158, 168, 169
Tone Pair 20, 21, 25
Touch-Tone System 168
Transceiver 112
Transducer 41, 122
Transformer 21, 24, 95, 109, 122, 123, 144

Transient Signal 123, 153
Transient 24
Transistor 37, 60, 91, 92, 93, 109, 115, 134, 149, 150, 151, 184, 185, 187, 192, 193

Transistor Amplifier 75
Transitory Energy 151
Transmitter 91, 93, 95, 101, 102, 103, 111, 112, 114, 163, 183, 184, 185, 188, 189

Triangle Wave 128, 129
TTL 58, 60, 65, 139
TTL Logic 139
TTL Series 53, 58
Tuning Fork Crystal 73

U
Ultrasonic Transducer 41
V
Variable Coil 95
Varistor 21, 24
Video 166
Video Monitor 166
Video/Audio Input 166
Visible Light 151
VLF 196
Voice Link 189
Voltage 114, 116, 120, 121, 130, 139, 144, 154

Voltage Amp 37
Voltage Divider 15, 37, 44, 93, 101, 122

Voltage Meter 37
Voltage Rail 93
Voltage Regulators 120, 122
Voltmeter 37, 154, 178
Volume 109, 111, 171, 185, 194
Volume Control 144

VU Meter 14, 18

W

Wattage 145
Waveform 128, 129
Wave 128, 129, 182
Wiring Scheme 129, 158

X

Xenon 148

Z

Zener Diode 25, 121